Missouri Botanical Garden

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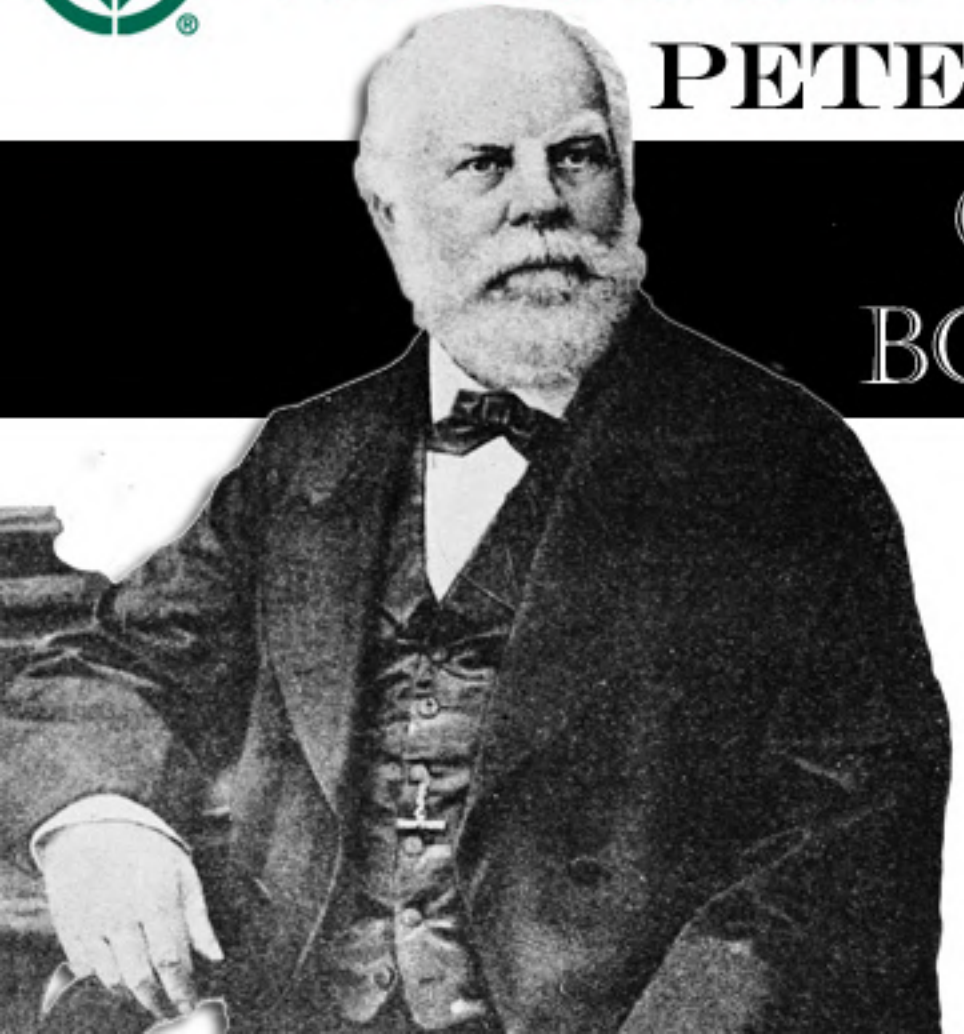
George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

E. Whipplei Engl & Bigelow ~~var~~ ssp ~~Whipplei~~ densely glabrous or ~~glabrous~~ woolly, glaucous or ovoid, with ~~13-17~~ ~~compound interrupted~~ ribs; ~~of the~~ 2 ~~off~~ exterior spines, ivory white, the lowest darkish, the 2 uppermost much longer, ~~off~~ curved; 4 central spines ~~dark brown~~ white the uppermost broad, longer & flat white, the others brown, lowest one hooked; flowers ~~dirty~~ green ~~distinctly~~ ~~white~~ with few (2-5) sepals ovary; berry ~~with~~ few large ~~tubercles~~ seeds. 1494

~~Var spinosior~~ On the lower Colorado, Bigelow, Newberry, To Desert valley, east of Severe lake, N. England; The latter form has more spines and often more than one of the central ones hooked. ~~color~~ varies in shape color & size

Plant 3-5 inches high, spines ~~brown~~ 3 x 20 lines long; flowers 9-15 lines long.

E. polyacanthus Engl & Bigel. densely ~~glaucous~~ ovoid, with 13-17 interrupted ribs, exterior spines about 20 or more ~~extend~~ white, reddening, uppermost broader & longer; central spines 5-10 uppermost longest broadest flat, curved, but rarely hooked, brown or brown, straight or mostly hooked; flowers yellow, large, with about 5 fringed sepals or ovary; seeds same ~~as~~ like as in last species.

From the headwaters of the Mohave to the Sage plains (Bigelow) of western Nevada Wm M Gabb. ~~4-10 inches high~~ Southern form (4-10 inches high) larger with longer spines (longest central 3-5 inches long); northern 3-6 inches high, with longest spines rarely more than 2 inches, stem ~~usually~~ 3-12 lines long slender; flowers 2-2½ inches long & wide. —

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

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Plants, no 1, from A. L. Siler, Hillsdale, Utah
Notes made march 12, 1883.

1495

Echinocactus Whipplei

Plants about four inches by three, slightly ovate; 13 costæ — the costæ very much compressed, (tubercles nearly an inch apart with a width of ~~4-5~~ about 3 lines) advancing in a spiral of about one fourth the circumference from the base of the whole plant from the base, the spiral curve greatest towards the base, tubercle about 2/3 the depth of the costa — six ~~costæ in all~~ tubercles to each costa in this plant, which from the scars show that the plant has flowered the three past years, and that its whole age is about six. Areola orbicular, — floriferous areola contiguous, and linear. The lower series of spines 9, — a half to three quarters of an inch, ~~thread-like~~, white; the superior, 4, one and a half inch long, chestnut brown needle-like, with a slight tendency to curve at the apex: central spines two, — one direct from the centre, needle-like, but a little stronger than the others, entirely central, about two inches long, lower half purple brown, the upper to near the apex white, the uppermost dirty reddish brown; the superior spine a little broader than the others, flat tapering to two inches in length, wholly white. (the curves in the central spines are either upwards or downwards, without rule)

Flower cylindrical from the base, though slightly wider at the apex (it has not fully expanded during the three days it has been open, about 1½ inches long by 1/4 inch wide at the base (about the shape and size of a woman's thimble), — sepals and petals together but 20, of which 6 might be called sepals, the lower sepals (about 4) wholly green, broadly ovate; the other four lance-ovate, purple edged, abruptly pointed; petals lance linear, drawn out to slender point, light purple.

Stamens in a dense solid mass, in very close at the base of the corolla (about three quarters of an inch below the apex of the petals, — anthers orange yellow; style thick, (just the tip of the anthers two days ago, but has grown two lines since, which I take to be a sign that it has been fertilized and will seed), — stigma cleft, the lobes linear, obtuse, brown.

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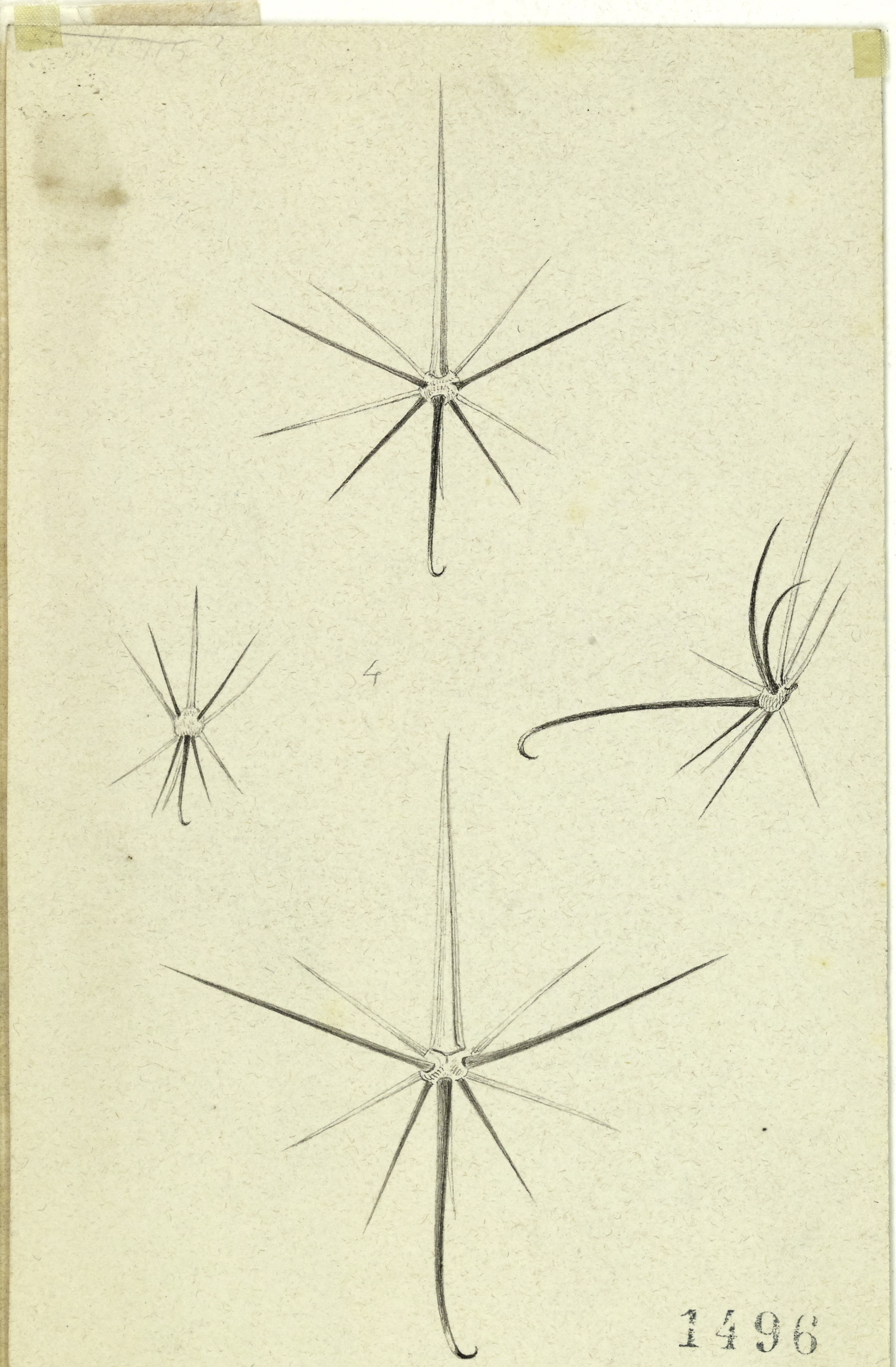

4

1496

Bigelow's
Original specimen

E. Whipplei

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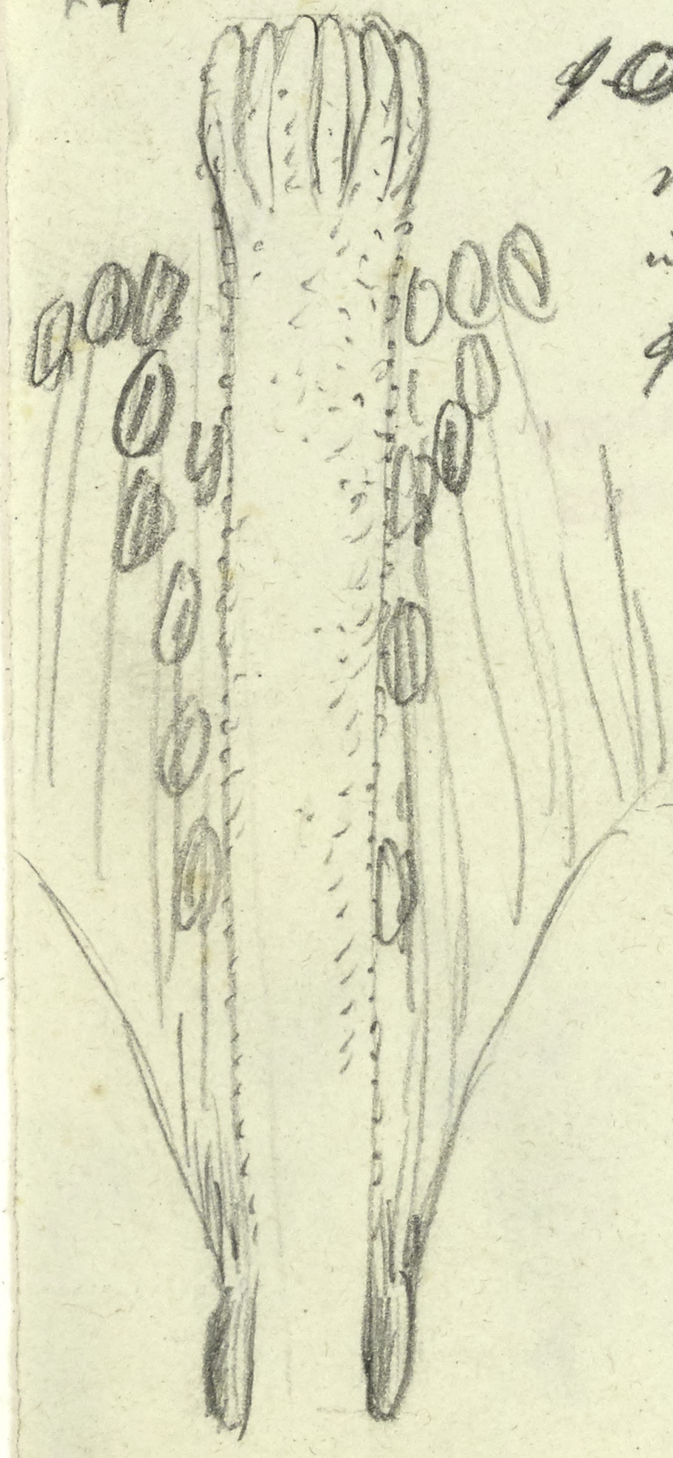
E. Whipplei

Brandegee S. W. Colorado

1875

×4



10 stigmas 3 mm long

nectar cavity

in it the corolla

of style naked

anthers

1 mm

papillae of style

×60

papillae about 0.1 mm long

on thick slender style, recent stigmas

JONES & LANGHORNE,
DRUGGISTS,
Corner Fifth and Market Streets, St. Louis, Mo.
1497

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cm
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1866

H. Engelmann leg.

1500

Echinocereus Whipplei var Utahensis

globosus, costis 13 compressis, interruptis, areolis sordidis 9–11 rufescentibus 2–3 cm inter se obscurioribus, radiis circiter 2 capillaribus, saepe longioribus, centralibus 4, flexuosis, omnibus elongatis, albo-flavescentibus, tenuissime pectinatim arcte adpressis, flore

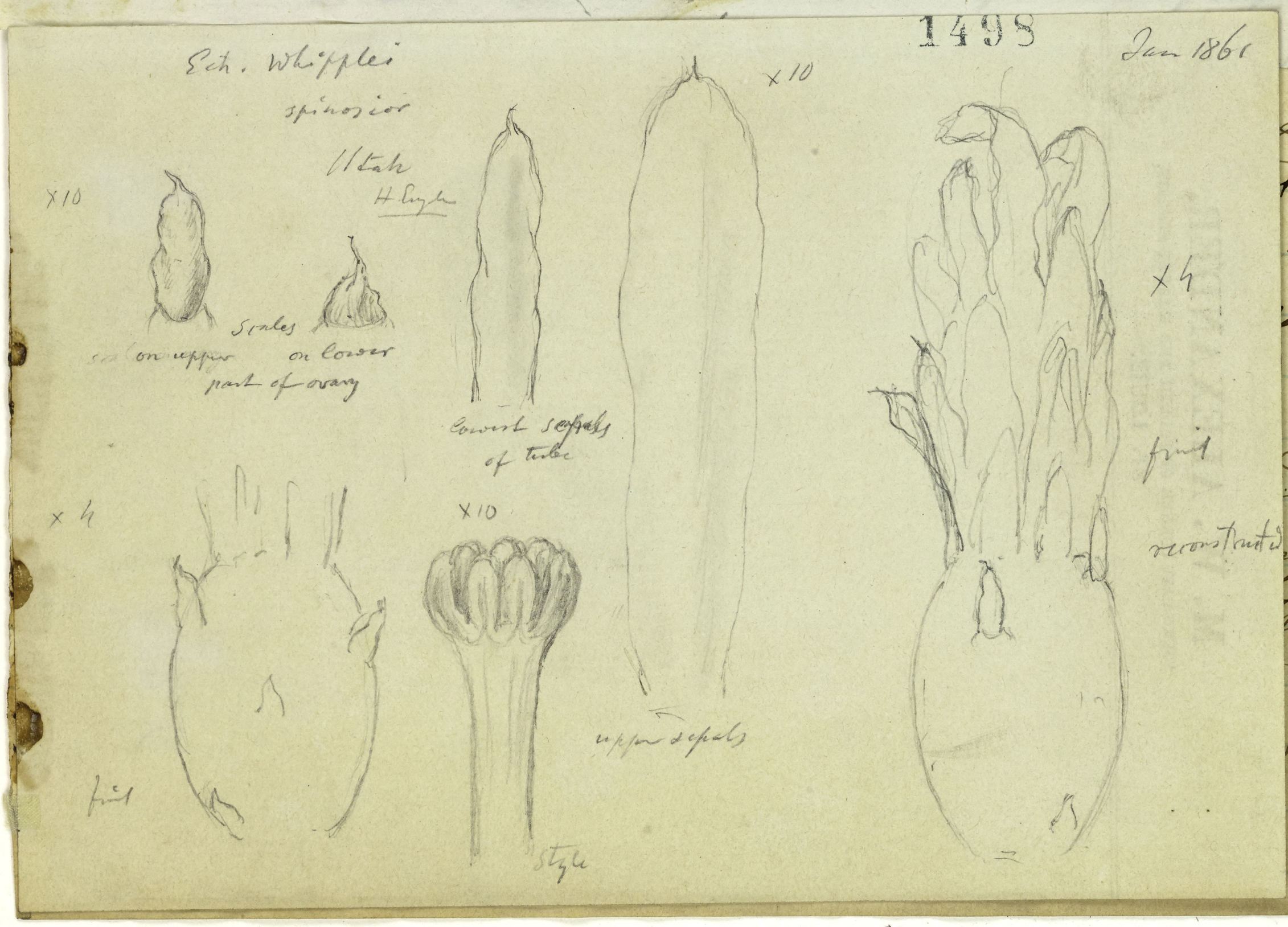
Dec 1859

1499

1498

Jan 1861

Ech. Whipplei
spinosior
Utah
H Engelm



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Desert Valley west of

July 29 [illegible]

Ech. Whipplei 1860

2 days after
first signs of
germination

of Ech. pubispinus

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ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

ARTHUR LEITCH,

APOTHECARY AND CHEMIST,

Sixth and Market streets, St. Louis, Mo.

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cm 0 1 2 3 4 5 6 7 8 9 10
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1860

H. Engelm. ly.

1500

Echinocactus Wislizeni var Utahensis

globosus; costis 13 compressis, tuberculatis, areolis subdistantibus 9–11 rigidis 2–3 cm. obtrusis albidis, centralibus 2 validis, longioribus, latioribus, uncinatis, reliquis 4, 1 paullo elongato lato pungentibus flexuosis, radialibus paullo brevioribus fuscis, omnibus sed solo apicem versus flavidis

semina magna, testa tuberculata, hilo (lata ovata) subcentrali, profunde exculpto, embryone hamato albumen copiosum amylaceum.

Desert Valley west of Camp Floyd. July 29 & Oct 6 24. Head globose, 2 inches diameter (amyth longest spine) Radials 1/2 – 1 1/2 inch long; centrals one 1/2 – 2 inches long. seeds 1 1/2 – 1 3/4 lin. long; tubercles of the hard test very small, in close concentric rows.

The difference from the Colorado plant seems to consist mainly in the larger number of radial spines, of which the lower & longer ones are usually more that.

for full descript. see note on the sheet of Ech. pubispinus

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Echinocactus Whipplei Engelm & Bigelow

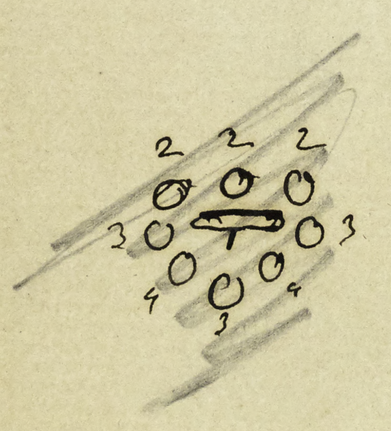
Ll. 7

1501

Dr Newberry leg & del
1858

Bunches of spines at summit
Flower - bunch of spines
1 white - black tip
222 Crimson
333 White
444 Crimson often white colored

Lower branches of spines
1 white with blk tip
flat
222 round. Brown in color
333 white
44 brownish - white



Color of flower -
Greenish white anthers
anthers yellow. Stigma green
Out side of petals -
Greenish. Crimson along center
Greenish yellow at sides -
Upper petals very faintly
tinged with the Crimson

Cactus. — C. 103. May 18

Echinocactus Wislizeni? — dwarfed — growing in sandy soils
On little Colorado 3 — 4 inches in diameter — half buried in ground
Spherical — in larger specimens ribs spiral

Center eaten by Mosquitos

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Dec 1883

1502

Echinocereus cylindraceus Eng.

near San Rafael, Lower California, C. A. Orcutt leg July Aug 1883
and as Cantiles (Pantillas, Rémy)

Heads single or in clusters of 5 or 6, 3–5 or 6 feet high 1 or rarely 2 feet in diam.
18–26 ribs, woolly top (vertex); areolæ oval about ¾ l. long, with the 4–5 lines
long flowerless areolæ attached, separated by a few obtuse at last
indented glands — distance between flowerless and the spiniferous
areola next above it about 3 lines.

4 central spines, annulated, flattened, at first reddish, then yellow;
lowest one slenderer and longest, 2½–3 in long — in my specimens
all spines slightly curved; 5 lower radial, 3–5 upper
radial spines, sometimes 1–3 lateral thinner (but always straight
rigid ones) on the sides above; lowest rad. spine shortest, more curved,
rarely hooked.

Flower about 1¾ inches long, sepals of ovary 30–40
fimbriate-ciliate; sep. of tube same number, lower ones nearly
equal to the former, upper ones rapidly becoming like the petals;
petals 12–16 oblanceolate obtuse, dentulate, greenish yellow; sepals
tinged with crimson — nectarous cavity 1 line deep —
style divided into 12–14 stigmas (length ¼ of the whole style 7: 28 mm)
fruit oval, rough fleshy

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abundance, and has not, I believe heretofore been noticed so far south. The smallest of the three I can not place anywhere from descriptions and specimens at my command It can hardly be a form of *alpinus* L. and it is apparently not a Knotted-leaved species anyhow. Will you kindly send me your determinations?

Respectfully Yours
N. L. Britton.

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1502-B

415-449

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M, *Baker*,

sub-genus
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Cylindracea ?
Atlantica ?
Arctica ?
Peninsulae ?

Californica ?
Europi ?
Acanthodes Lea ?

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THE

Slough and a batch sent
Royal, Little Gem, Epi-
and others, commenced
as more or less striking
day. One of the most
Gaugers' Kale, was sent
of a century ago; and
Potato at a more recent
Celery, and the
ated from Slough.

the Royal Nursery is
cleanest, best ordered
in the country, and
satisfactory stock found
extent during the past
itself according to the
scale.

is not unknown, though
It is not for want of
published so little; but,
he loves so well, and
occupation could not
Chalrey he published
Culture of the Dahlia
scriptive Catalogue of
blished, in pamphlet
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day Mr. Turner suc-
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by the late Mr. John
in the management.
me of the *Florist and*
Mr. Thomas Moore,
ntributed to some of
ccasionally.

Turner has on not a
behalf of his fellow
as a complimentary
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decided to invite a
and the late Mr.
resent the nursery-
The Duke of
Prime Minister of
Mr. Turner was also
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Rev. Canon Hole
Mr. Turner laboured
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men eminent as
—John Edwards,
Mr. Rivers, have
in connection with
Auricula Society
has found a
National Car-
National Dahlia
Show, and
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nothing has to be
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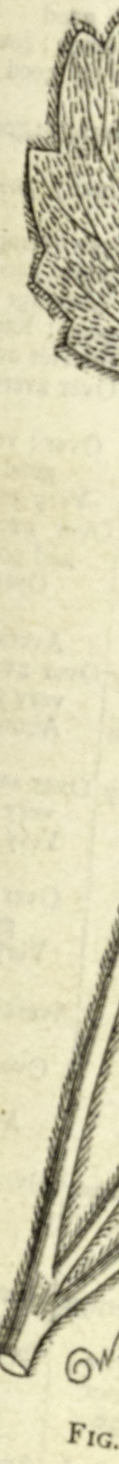

FIG.

sometimes a tra
present, they
corolla.

Mr. Thompso
which a figure f
prepared. This
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consequence, had
are dentate, and t
Mr. Thompson's
an authentic speci
California. The
with short glandul
hue; the leaves
neatly crenate, and
believe in the speci
the one represented
Gray, in the *Botan*
says, "corolla violet
is intermediate betw
size and crenation o

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California etc 1502-A
415-424

fully grown and selected at Slough, and a batch sent out—Advancer, Princess Royal, Little Gem, Epicurean, Wonderful, Premier, and others, commenced that long line of improvements more or less striking which has continued to this day. One of the most useful of winter Greens, the Cottagers' Kale, was sent out by Mr. Turner a quarter of a century ago; and the well-known Schoolmaster Potato at a more recent date. The Incomparable White Celery, and the Golden Gem Melon, also emanated from Slough.

It need scarcely be said that the Royal Nursery is widely known as one of the cleanest, best ordered and appointed establishments in the country, and famous for the healthy and satisfactory stock found there. It has grown largely in extent during the past twenty years, and yet extends itself according to the requirements of an increasing trade.

As an author Mr. Turner is not unknown, though his productions are few. It is not for want of ability to write that he has published so little; but, being always with the flowers he loves so well, and delighted to be there, literary occupation could not draw him aside. When at Chalvey he published *Practical Observations on the Culture of the Dahlia for Exhibition, with a Descriptive Catalogue of Dahlias, &c.* In 1850 he published, in pamphlet form, some papers on the *Culture of the Pansy*, which had previously appeared in the pages of *The Florist and Garden Miscellany*. In 1851 Mr. Turner succeeded the late Mr. Edward Beck as the conductor of the *Florist*, and continued in this capacity until the end of 1860, when the work underwent some modification, and Dr. Hogg, assisted by the late Mr. John Spencer, took an active share in the management. It is still continued under the name of the *Florist and Pomologist*, and is edited by Mr. Thomas Moore, F.L.S. At times Mr. Turner contributed to some of the gardening papers, but only occasionally.

As a representative man Mr. Turner has on not a few occasions stood forward on behalf of his fellow florists. Many years ago, when a complimentary dinner was given to the late Mr. Charles Kean, the eminent actor, the committee decided to invite a representative of every profession, and the late Mr. James Veitch was present to represent the nurserymen and Mr. Turner the florists. The Duke of Newcastle presided, the present Prime Minister of England being one of the guests. Mr. Turner was also a very active member of the Executive Committee of the Great International Horticultural Exhibition of 1866, and took more 1st prizes than any other exhibitor. In conjunction with the Rev. Canon Hole and the late Mr. Thomas Rivers, Mr. Turner laboured hard in carrying out the arrangements of the first National Rose Show, held in St. James' Hall, Regent Street, on July 1, 1858. Several men eminent as florists gave their quota of labour—John Edwards, Richard Stains, and others, who, with Mr. Rivers, have since gone over to the majority. In connection with the Southern Section of the National Auricula Society (a flower that for years past has found a congenial home at Slough), the National Carnation and Picotee Society, the National Dahlia Exhibition, the International Potato Show, and other societies, he is a willing and hearty helper; in fact he is ever to the fore when something has to be done in the best interests of horticulture. He has been a steady supporter of the Gardeners' Benevolent Institution for many years past. He most cordially aided in every way the old National Floricultural Society until it was superseded by the establishment of the Floral Committee of the Royal Horticultural Society; and he has been a member of this body, with short intervals of non-official existence, almost since its establishment.

Mr. Turner has for many years taken an active interest in local matters affecting Slough, and exhibited a commendable public spirit.

And so we bring this somewhat imperfect sketch to a close. A busy life extending over half a century's duration embraces many incidents, only a few of which can be compressed within the limits of a brief memoir. The reading of the foregoing lines will awaken in not a few hearts memories of old, and recall occurrences that it might be well had been incorporated in this concise story of a life. We can only give a necessarily imperfect outline. Those who will can fill it out to perfect fulness with recollections that will never die, so long as the powers of the

New Garden Plants.

PHACELIA CAMPANULARIA, *A. Gray.*

IN the *Gardeners' Chronicle*, n.s., vol. xviii., p. 51, a description of this handsome half-hardy annual was given, from specimens sent by Mr. Thompson, of Ipswich. Seeds of it were sent to Kew by the same gentleman, and the accompanying figure (fig. 22) has been prepared from a plant which flowered here this season. It is dwarfer and more compact than P. Whitlavia, A. Gray (Whitlavia grandiflora, and W. minor, Harvey), and the corollas, which measure from ¾—1⅛ inch in breadth, according to vigour, are bright gentian-blue, with five pure white oblong spots on the inside, situate below the angles of the corolla lobes; these white spots become ochreous-yellow as the flower fades; on the outside they are usually absent,

FIG. 22.—PHACELIA CAMPANULARIA.

sometimes a trace of them may be seen, but here, if present, they are carried down to the base of the corolla.

Mr. Thompson has now sent a plant to Kew, from which a figure for the *Botanical Magazine* has been prepared. This plant is more compact than the one from which our drawing was made, which latter was grown in a deep frame early in the season, and, in consequence, had a drawn-up appearance—the leaves are dentate, and the whole plant much less hairy than in Mr. Thompson's plant, which is itself less hairy than an authentic specimen sent by Dr. Gray to Kew from California. The wild plant is so copiously covered with short glandular hairs as to give it a cinereous hue; the leaves are subcordate, 1 inch long and neatly crenate, and for some time I was unable to believe in the specific identity of this specimen with the one represented in our figure, especially as Dr. Gray, in the *Botany of California*, vol. ii., p. 467, says, "corolla violet-purple." Mr. Thompson's plant is intermediate between the two in hairiness and in size and crenation of leaf, showing that it varies in detected. If it proves as hardy as the purple-flowered P. Whitlavia, it will be a great acquisition, and will doubtless take a place in the front rank of showy half-hardy annuals. *R. A. Rolfe.*

ACROSTICHUM (ELAPHOGLOSSUM) MAGNUM, *Baker, n. sp.**

This is a large new Acrostichum of the sub-genus Elaphoglossum, which was discovered in 1880 by Mr. G. S. Jenman, on the banks of the Mazaruni River, in British Guiana, and of which he has just sent living plants to Kew. It is allied to A. perelegans and A. auricomum.

Root-stock suberect. Basal paleæ small, linear subulate, nearly black. Stipes tufted, those of the barren frond 3—4 inches long, clothed with small lanceolate adpressed fimbriated membranous paleæ. Sterile lamina 2—3 feet long, 1½—2 inches broad at the middle, narrowed gradually to the apex and base, membranous in texture, green on both sides, the paleæ of the upper surface numerous but inconspicuous, minute, ovate, adpressed, whitish, deeply fimbriated, of the under side densest on the midrib, not adpressed, minute, membranous, lanceolate, ferruginous, densely fimbriated; veins slightly ascending, moderately close, distinct, simple or forked. Fertile frond not yet seen. *J. G. Baker.*

ANGULOA RUCKERI (*Lindl.*) RETUSA, *n. var.*

A most remarkable variety. It is lemon colour outside the perigone, full of dark purple blotches inside. The good character is found in the lip. Its lateral laciniæ are quite abrupt, rectangular; its median lacinia is unusually small, reflexed, covered with short strong hairs. The column has a very strong angle at a short interval above the base. This curious plant, whose constancy can only be judged by time, though it is to be expected, was kindly sent by Mr. W. Bull, of Chelsea. *H. G. Rchb. f.*

ODONTOGLOSSUM SCHLIEPERIANUM (*Rchb. f.*), O. FLAVIDUM, *var.*

This is the Odontoglossum grande flavidum of the late Herr Klotzsch. It is a very fine variety, sulphur colour, with a few exceedingly light cinnamon bars at base of the sepals and petals, some orange on base of the lip and on the callus, and with brown hairs on the wings of the column. I have finally had it now afresh from Mr. B. S. Williams, Victoria and Paradise Nurseries. *H. G. Rchb. f.*

EDIBLE FUNGI.

ACCORDING to *Coulter's Gazette*, Dr. J. J. Brown, of Sheboygan, Wisconsin, has for several seasons experimented with field fungi for culinary purposes. He finds no fungi that one would be likely to gather for eating that are violently poisonous. His method for discovering the valuable kinds is one that requires no scientific knowledge of the plants, and commends itself for its practical common sense. He gathers fresh clean-looking specimens; if they have a bad or unpleasant odour when cooking they are discarded, and one will soon be able to tell the good from the bad at this time with considerable certainty. A small amount of the cooked fungus is then eaten. If it has a pleasant taste, and no disagreeable results follow, it is partaken of more freely next time, and is soon put on the list of valuable kinds. Tasting of the fresh fungus is but little assistance, as an acrid or nauseating property is often dispelled in the preparation. There is no doubt that the danger of fungus-poisoning has been unnecessarily exaggerated. With the caution just pointed out the danger is so greatly lessened that it is practically reduced to zero, and no one need hesitate to make use of this abundant supply of nourishing and palatable food. It may be added that many sorts will be found harmless enough, but of no more culinary value than so much grass or wood, being either not juicy or without a rich flavour. Our contemporary is responsible for the whole of the foregoing. No doubt proper cooking neutralises some of the harmful properties, and another important point is to gather your fungus before it is too old; but, as far as European fungi are concerned at any rate, it is better to learn to distinguish the various kinds than to proceed in the experimental fashion recommended by Dr. Brown.

* *Acrostichum (Elaphoglossum) magnum*, Baker, n. sp.—

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REPORT ON THE CONDITION OF THE FRUIT CROPS.

[FROM OUR OWN CORRESPONDENTS, AUGUST, 1883.]

COUNTY.	APRICOTS.	PLUMS.	CHERRIES.	PEACHES AND NECTARINES.	APPLES.	PEARS.	SMALL FRUITS.	STRAWBERRIES.	NUTS.	NAME AND ADDRESS.
SCOTLAND.										
ABERDEEN	....	Average; good	Average; good	Not grown out-of-doors	Average	Average; good	Over average; very good	Average; good	....	John Forrest, Haddo House, Aberdeen
	....	....	Over; good	....	Over; good	Under; bad	Average; good	Over; very good	....	John Proctor, Slains Castle
	Under	Under	Average; very good	Not grown outside	Under; small	Average	Over; very good	Over; very good	Under	R. Farquhar, Fyvie Castle Gardens
ARGYLL	....	Under average; good	Over average; good	....	Over average; good	Under average; good	Average; all good	Over; very good	Under; bad	J. T., Lochgilphead
	Under	Under	Average	None grown outside	Average	Average	Average; good	Average; bad	....	G. Taylor, Castle Gardens, Inverary
AYR	....	Very scarce	Thin crop	....	Medium	Thin crop	Abundant	Very heavy crop	....	John Gray, Eglinton Castle, Irvine
BANFF	Under; very good	Average; good	Morello average; others under	Average; good	Over average	Average; good	Over average; good	Over average; good	....	John Webster, Gordon Castle Fochabers
BERWICK	Under	Under	Average	....	Over	Over	Under	Average	....	W. Fowler, Mertoun, St. Boswell's
	Failure	Under	Average; good	Average	Over; very good	Average	Over; good	Over; good	....	W. Richardson, Ayton Castle
	Below average; bad	Below average	Average; good	No fruit outside	Heavy crop	Poor crop	Very good crop	Very good crop	Poor	John Reid, Blackadder, Chirnside
CAITHNESS	Under; bad	Average; good	Average; good	....	Under; bad	Under; bad	Average; good	Average; good	....	John Sutherland, Langwell
CLACKMANNAN	Under; bad	Under	Over; very good	Under	Over; good	Average; good	Over; very good	Average; good	Not much grown	Thomas Ormiston, Alloa Park
CROMARTY	Under	Over; very good	Average; good	Under	Over; very good	Over; very good	Over; very good	Average; good	....	J. McKay, Tarbat Gardens, Parkhill
DUMBARTON	....	Under; good	Average; good	None outside	Average	Average	Average; good	Over; good	....	Alex. Scott, Auchendennan
	....	Under; Victorias good	Average	None outside	Average	Average	Very good	Very good	....	James Mitchell, Camis Eskan
DUMFRIES	....	Under; bad	Average; good	Under; good	Average; good	Under; good	Average; good	Average; good	....	John Shannon, Jardine Hall
	....	Over; good	Average; good	....	Under	Under	Over; good	Average; good	....	James Smart, Raehill Gardens, Lockerbie
EAST LOTHIAN	Under average; good	Under average	Over average; good	Average	Over average	Over average	Over average; very good	Over average; very good	Under average	L. Dow, Newbyth, Prestonkirk
	Under; good	Under; good	Dessert under Morellos over	....	Over; very good	Average; good; Jargonelles over	Average; good; Raspberries over	Average; good	Average; good	Wm. McKelvie, Broxmouth Gardens, Dunbar
FIFE	....	Under average	Over average	....	Average	Under average	Over average	Average	....	W. Henderson, Balbirnie Gardens
	....	Over	Over; very good	....	Over	Average	Over; very good	Average; good	....	George Ramsay, Fordell House Gardens
FORFAR	Bad	Good	Good	Good	Very good	Good	Very good	Very good	Good	Geo. Johnston, Glamis Castle
	....	Under; good	Over; very good	....	Average; good	Under; good	Over average, and good	Over average, and good	....	James Mitchell, Panmure Gardens, Carnoustie
INVERNESS	....	Over	Under	....	Over	Over	Over	Good	....	A. McDonald, The Gardens, Balmaccan
KINROSS	....	Under	Average	....	Under	Average	Average	Under	....	John Fortune, Blair Adam
	Few grown	Under average	Average	Under	Over average	Under average	Over average; very good	Over average; very good	....	Andrew Turnbull, Bothwell Castle
LINLITHGOW	Large crop	Very few	Good crop	Good crop	Moderate	Heavy crop on south walls	Abundant	Good crop	Good crop	Wm. Muir, Hopetown Gardens
MIDLOTHIAN	Very few; good	Over average; very good	Over average; very good	Under average; good	Over average; very good	Average; very good	Over average; very good	Over average; very good	Scarce; good	Malcolm Dunn, Dalkeith Palace Gardens
	Under	Very bad	Average	....	Over average	Good	Very good	Over average;	....	Charles Johnston, Dalhousie Castle Gardens
MORAY	Under	Average	Average; good	Average	Over	Over	Over; very good	Abundant, and very good	.. .	D. Cunningham, Darnaway Castle, Forres
NAIRN	Average	Under	Average	Under	Good	Average	Very good	Very good	....	James Manson, Kilrannock Castle
ORKNEY	....	....	Average; good	Average	Over average; good	Average	Average; good	Average; very good	....	Thos. McDonald, Balfour Castle Gardens, Kirkwall
PEEBLES	....	Average	Over; good	....	Over	....	Over; good	Over; very good	....	Malcolm McIntyre, The Glen, Innerleithen
PERTH	Average; very good	Over; good	Over; very good	Average; very fine	Under	Average	Average	Under	....	P. W. Fairgrieve, Dunkeld
	....	Average	Average	....	Average	Over average	Over average	Average; much destroyed by rain	....	George Croucher, The Gardens, Ochtertyre, Crieff
	Under average	Under average	Over average	Average	Over average	Under average	Over average; very good	Over average; fine	Average	David Doig, Rossie Priory, Inchture
RENFREW	....	Under	Average	Over average under glass	Average; good	Under average; poor	Over average; good	Abundant; very good	Under average	Thomas Lunt, Ardgowan
ROSS-SHIRE	Under	Average	Under	Under	Over	Average	Average	Average	....	D. Harvey, Invergordon Castle
	....	Under; good	Above; very good	Under; bad	Average; good	Under; bad	Average; very good	Average; good	....	J. Munro, Duncraig, Strome Ferry
ROXBURGH	Average; good	Average; good	Average; good	Peaches under; good	Over; good	Under; good	Over; good	Average; good	....	John Galloway, Minto Gardens, Hawick
STIRLING	Under	Average; var Victoria	Average; good	....	Average; good	Average; good	Over; good	Average; good	....	Maurice Fitzgerald, Dunmore Gardens
SUTHERLAND	....	Under	Over; good	....	Over	Under	Over; good	Average; good	Average	D. Melville, Dunrobin Gardens
WEST LOTHIAN	Average	Under	Average	Under	Average	Under	Average	Average	....	John Moyes, Dalmeny Park, Edinburgh
WIGTONSHIRE	....	Under; good	Over; very good	....	Over; good	Under; good	Over; good	Over; good	....	Archibald Fowler, Castle Kennedy
ENGLAND—NORTHERN COUNTIES.										
NORTHUMBERLAND	Under average	Under average	Average	Average	Over average	Average	Average; good	Over average; good	Average	Thomas Bowie, Chillingham Castle Gardens
CUMBERLAND	Failure	Failure	Morellos average; others under	None grown outside	Average; good	Average	Over average; good	Over average; good	....	J. Hammond, Brayton, Carlisle
WESTMORELAND	....	Failure	Over; good	Good under glass case	Average	Average	Over; good	Over; good	Under	Wm. A. Miller, Underley Gardens
	Under average	Under average	Average	None grown outside	Average	Average	Over average; very good	Over average; very good	Plentiful	Samuel Sarple, Dallam Towers, Milnthorpe
	....	Good; Damsons average	Average	Scarce	Average	Scarce	Very good	Very good	Fair	Edward Evans, Storrs, Windermere
DURHAM	Under; bad	Under; bad	Average; very good	None outdoors	Over average; very good	Over; very good	Very good	Average; good	Under; bad	J. Hunter, Lambton, Fence Houses
	Under average; very good	Under average	Over average; good	Under average; very good	Over average	Over average	Over average; very good	Average; good	Under average	James Larkin, Auckland Castle, Bishop Auckland
YORKSHIRE	Under average	Under average	Under average	Average; good	Under average; bad	Under average; bad	Average	Average	Under average	Michael Saul, Stourton Castle,

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1503

Echinocactus Orcuttii n sp

Plant often decumbent, 1 ft. in diameter and 2 to 3½ ft. high, heads single or in clusters often of 18 or more, ribs 20-22, spirally inclined, intervals deep, 33 to 50 flowers in one head, petals with deep crimson vein bordered with light green, sepals deep crimson. Stigmata near 20, lemon yellow with the slender filaments, anthers deep cadmium. Spines reddish, stout like *E. viridescens*, not giving the net-like appearance.

Fruit less scaly, light crimson, nearer pulpy than the last two species, 1½ in. long, an inch or more thick.

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Agave Pringlei, Engelm.. Flowers collected July 1885.

Flowering stalks 4 to 15 ft. high, usually 6, 7 or 12 ft.. Base of one of the largest 3 in. in diameter, at base of panicle 1½ in., bracts at base 12 to 15 inches long to 3 in. at base of panicle, stalk 15 ft. long, Panicle 2 ft. 9 in. long, greatest width 16 in. (2 ft. from base 9 in.), with 21 branches not over 5 in. long, 19 small clusters of flowers (103 flowers) to one branch, that was 6 x 7 in., length of flower & capsule 3 in..

Known to the Indians as "mescal" with A. deserti and to the Spaniards as "Maguey". Leaves preferred to those of A. deserti by Indians for the larger fiber.

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Dec. 1883

Echinocactus Orcuttii n. sp.

Palm Valley, Coast California, Lt. May & Jun 1883.
C. R. Orcutt leg. 30–50 miles S.E of San Diego

Heads 2–3½ feet high, one foot in diam, single or in clusters of 2 to 18 or more, not rarely decumbent.

Ribs 18–22, oft spiral, grooves deep (12–14 lines deep) areolæ – spines – &c

flowers 1½ in long; sepals of many ovate, 30, erect, obtuse, crenulate; sepals of tube short as many, gradually longer and at last similar to petals; petals 12–18 erose dentate, deep crimson in center, Border by light green & yellow; sepals purplish with paler borders. Nectary ½ line long.

Style divided to near the middle into 15 or 18 stigmas, fruit.

1504

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CHRISTMAS PRESENTS

AT A GREAT REDUCTION, AT

R. JAEGERMANN, 415 Pine Street, bet. 4th & 5th, ST. LOUIS.

DEAR SIR—Permit us to call your attention to our large stock of Diamonds, and all kinds of Watches, which we will offer for the next Thirty Days, at a great reduction. We have reduced our

Diamond Earrings	from	$300.	to	$275.
" "	"	235.	to	200.
" "	"	200.	to	175.
" "	"	190.	to	160.
" "	"	125.	to	100.
" "	"	45.	to	35.
Diamond Lace Pins	"	175.	to	150.
" " "	"	150.	to	125.
" " "	"	125.	to	100.
" " "	"	100.	to	80.
" " "	"	75.	to	65.
" " "	"	50.	to	40.
" " "	"	35.	to	30.
" " "	"	30.	to	25.
" " "	"	20.	to	16.
Diamond Rings	"	150.	to	130.
" "	"	140.	to	120.
" "	"	130.	to	115.
" "	"	115.	to	100.

Diamond Rings	from	$100.	to	$90.
" "	"	80.	to	65.
" "	"	60.	to	50.
" "	"	50.	to	42.50
" "	"	42.50	to	35.
" "	"	35.	to	30.
" "	"	25.	to	22.50
Diamond Studs	"	175.	to	160.
" "	"	150.	to	140.
" "	"	125.	to	110.
" "	"	100.	to	90.
" "	"	85.	to	75.
" "	"	75.	to	65.
" "	"	65.	to	58.
" "	"	50.	to	45.
" "	"	40.	to	35.
" "	"	30.	to	25.
" "	"	20.	to	18.
" "	"	17.	to	15.

Fine gold Howard Stemwinder, heat cold and position, patent Regulator ..... $200. .... to $175. ....

.... lower grade .....

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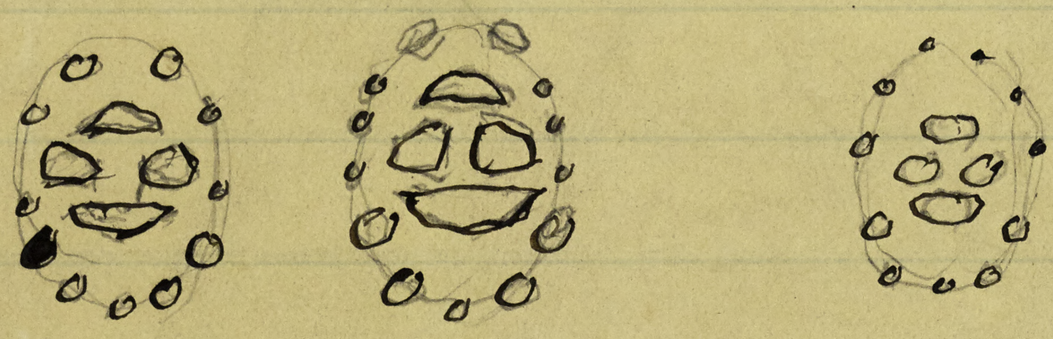
Echinocactus Orcuttii

June 1st 1883. C. R Orcutt 30-50 miles SE from San Diego, in Lower California

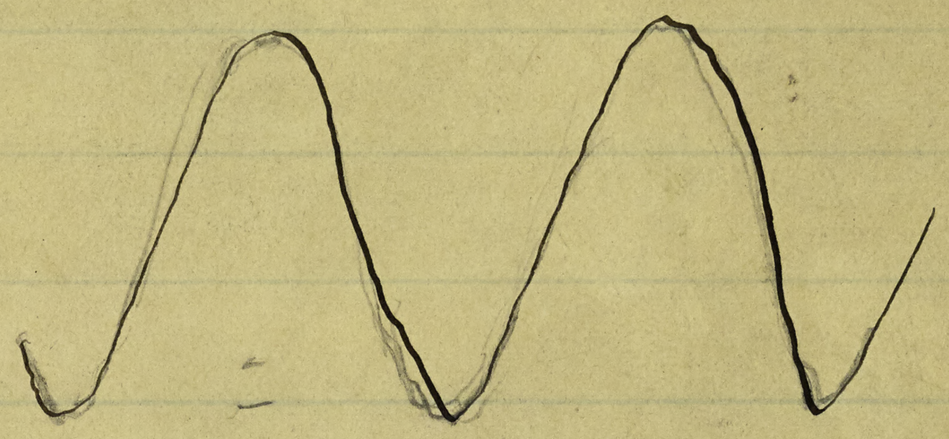
1505

Stems 15 to 20 in a cluster, each 2 to 3½ feet high, with 18 to 22 ribs, separated by very deep grooves (12-14 lines deep)

11 ridd 13 ridd sp. 11 ridd sp.

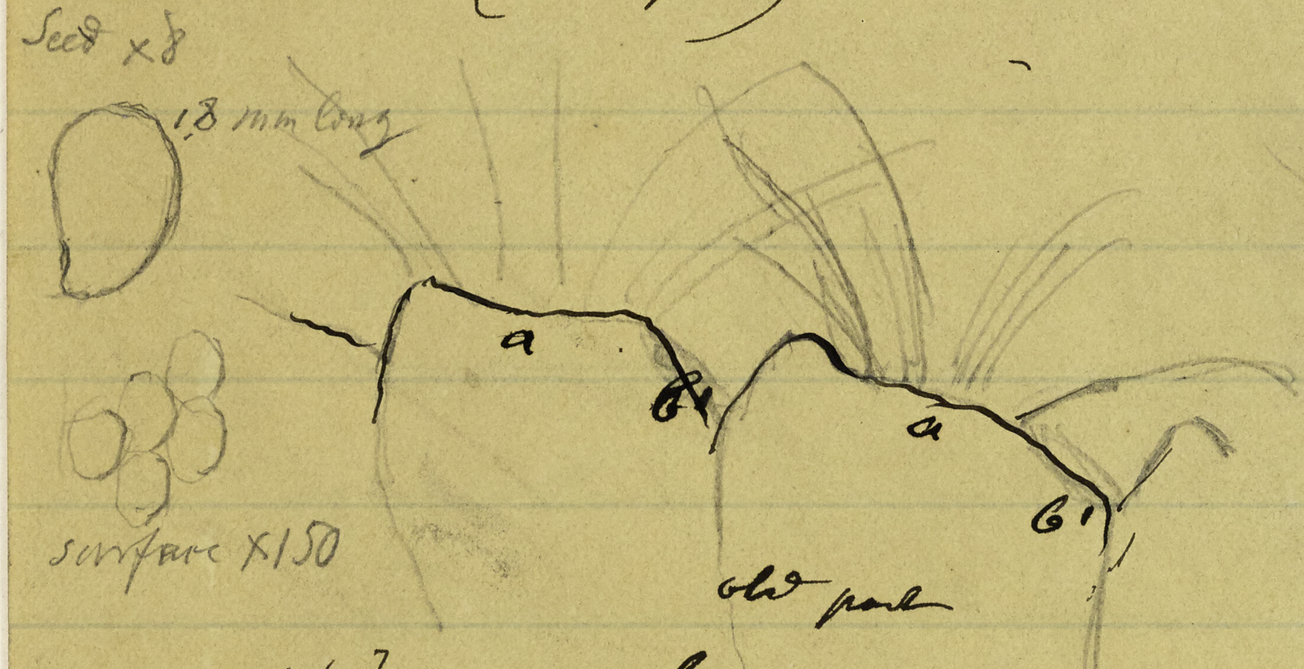


lower Central spi 5-7½ mm wide
side ones only 1-1½ mm. and more angular than flat



Many globose with 40 or 50 ribs form slightly undulate fringed scales or sepals; flower without very apparently about 1 inch long, outer and inner sepals very numerous, petals apparently bright (rose red?) style deeply divided stigmas 15 to 20 berry green and fleshy? globose about ⅝ or ¾ inch thick: crowned with the very persistent flower

Seeds (unripe) brown



a spine from areola
b floss from areola fresh, as long or longer than a, very woolly
b' same old, contracted,

angular to flat
Spines extremely variable, from 1 to 7 mm wide (central largest)
11-13 radial 4 central only radial unequal, lowest and second central upper ones are the thickest.

Ribs somewhat mammillate, with transverse grooves

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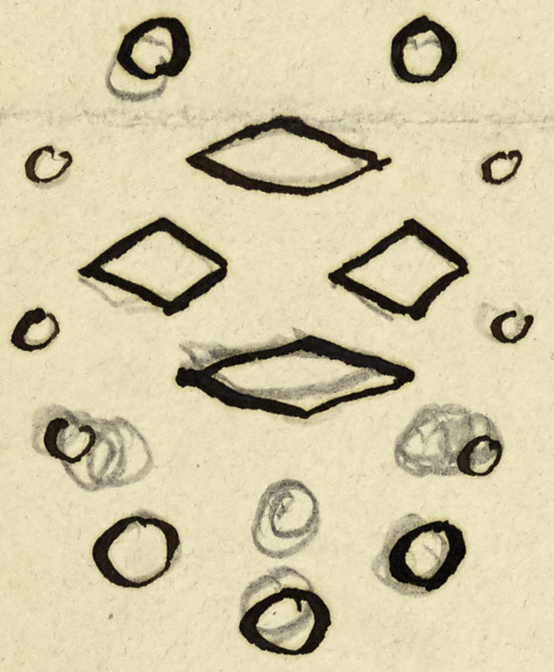
April 26 1882

1506



Echinocereus, Wislizeni var
Lower California, M E Jones

Oblong 5 ribbed areola
joined by the oblong floriferous
areola; separated from it
by 3-5 indurated glands

Spines: 4 central, flat or angled,
cross ribbed - reddish straight or slightly curved,
the lowest one the broadest, 2 inches long,
Radial spines 2 upper and 3 lower
ones, ~~rigid~~, ~~straight~~, ~~flattened~~,
flexuous
3 lateral ones on each side
(together 11), all reddish,

Most evidently closely allied to
E. Wislizeni, if not an extreme
form of it

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